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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/236,897	01/26/1999	AKIHIRO KOMATSU	Q53086	9842

7590

12/16/2005

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EXAMINER

CROSS, LATOYA I

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/236,897

Applicant(s)

KOMATSU ET AL

Examiner

LaToya C. Younger

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5,6,8,9 and 13-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5,6,8,9 and 13-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 26, 2005 has been entered.

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 5, 6 and 9, 13-28, 30-32, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 4,296,069 to Smith et al in view of US Patent 6,180,061 to Bogen et al and US Patent 5,059,393 to Quenin et al.

Smith et al '069 disclose an apparatus for processing analysis slides in a chemical analyzer. The apparatus comprises a first meter device (18) for metering (spotting) sample fluid from sample cups on a sample tray onto an analysis slide of the colorimetric type. A second meter device is provided to deposit sample and reference fluid onto analysis slides of the potentiometer type (col. 3, lines 40-45). Incubators (22, 24) are provided to function with analysis means (23, 25) (equivalent to Applicants' claimed concentration measuring means). The analysis means measure a change in the analysis slides as a result of the fluid being deposited thereon (col. 4, lines 40-45). Results from the analysis means (25) may be transmitted to a computer for appropriate calculations of concentration for various samples (col. 7, lines 53-58). Control circuits are provided which include thermistors for controlling the temperature of

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various heating elements (col. 4, lines 28-37). The thermistors are equivalent to Applicants' claimed temperature control means. With respect to amended claims 9 and 24, Smith et al teach a spring retainer (88) for holding the analysis slide in position before moving to the incubator. After in the incubator, the slide is held in place by clips (100). Also disclosed are housings (14, 16) where analysis slides are supplied and moved between the incubator (24) and analysis means (25), via a slide transfer mechanism (128). The housings (14, 16) are equivalent to Applicants' claimed chemical analysis element supply section, recited in claim 6. The slide transfer mechanism (128) is equivalent to Applicants' claimed conveyer means recited in claim 6. Further, with respect to 21-23, the slide transfer mechanism (128) is capable of removing a slide from read station and either returning the slide to the incubator (24) or discarding the slide, depending on whether endpoint analysis has been performed (col. 6, line 57 - col. 7, line 6). The position of the analysis slide is detected by means of an optical sensor (col. 6, lines 33-36). Also disclosed by Smith et al is the additional use of an ion activity measuring means comprising electrodes selective to ion activity (col. 3, lines 12-15), as recited in claims 5, 9 and 16.

Smith et al fail to teach 1) a single incubator for receiving and holding all the analysis elements and maintaining a constant temperature for the analysis slides, and wherein the incubator may simultaneously maintain different temperatures for different slides and 2) a bar code reader for detection of the position of the analysis slides by way of reading a bar code on the slides.

With respect to the single incubator, Bogen et al teach an apparatus for stain processing analysis slides. The apparatus of Bogen et al is similar to that of Smith et al in that it functions as an automatic device for preparing slides for analysis. The device of Bogen et al comprises a slide rotor having multiple slide frames capable of holding slides in different slide positions, i.e. for receiving and storing multiple analysis slides, as recited in claims 13, 14, 17 and 18. See col. 5, lines 56-61. Each slide frame has a slide frame base having heating areas under each of the slide positions. The heating elements are formed into

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the slide frame base. Because each slide has its own heating element, the slides can be maintained at different temperatures simultaneously, as recited in claims 14, 15, 18 and 19. The slide rotor along with the individualized slide frames and heating elements constitute a single incubator for multiple slides, as recited in claims 9 and 16. See col. 5, line 61 - col. 6, line 21. It would have been obvious to one of ordinary skill in the art to modify the two-incubator system of Smith et al and use a single incubator for multiple slides (as disclosed by Bogen et al) because such would provide more efficient operation where multiple slides need to be analyzed. The incubator described in Smith et al allows only two slides to be heated, whereas the incubator of Bogen et al allows multiple slides to be heated and also allows individualized heating, so that temperature conditions of one slide will not affect the temperature conditions of another. Therefore, multiple slide processing may take place even where each slide is being processed differently.

With respect to a detector comprising a bar code reader, as recited in claims 5, 9, 16 and 20, Smith et al teaches using an optical source to detect the position of the slides (col. 6, lines 33-36 of Smith et al). Quenin et al teach an analyzer similar to that of Smith et al and Bogen et al where bar codes are disposed on each analysis slide. A bar code reader is provided to determine the kind of slide moving toward the dispensing station and also determine the position of the slide (col. 4). It would have been obvious to one of ordinary skill in the art to modify Smith et al by using a bar code reader to determine the position of the slides instead of an optical source, because in addition to determining the position of the slides, other useful information about the slide, such as type, can be determined when bar codes are used. Using bar codes will also provide a manner of keeping track, by way of computer data, of the analyses taking place in the automatic system.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious, within the meaning of 35 USC 103, in view of the teachings of Smith et al, Bogen et al and Quenin et al.

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4. Claims 8, 29 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al, Bogen et al and Quenin et al as applied to the claims above, and further in view of US Patent 5,814,277 to Bell et al.

With respect to claim 8, neither Smith et al, Bogen et al nor Quenin et al teach a diluting unit in the analysis systems. Bell et al teach an automatic chemical analyzer comprising sample and reagent containers (22, 24). Aliquots of sample and reagent are drawn up from the chambers and dispensed into test cells.

Bell et al disclose that the samples may be diluted automatically by dispensing buffer solution from reservoir (52) into the test cells. The automatic dilution of sample is disclosed as being advantageous when the sample concentration is too high or when limited amounts of sample are available for testing. Automated dilution also eliminates the potential for user error in sample dilution. See col. 9, lines 10-18.

It would have been obvious to one of ordinary skill in the art to use a diluting unit in the system of Smith et al to allow analysis even where the sample size is small. Also, it would have been obvious to the ordinarily-skilled artisan to use an automatic dilution system to reduce user error and increase the efficiency of the operation.

Therefore, for the reasons set forth above, Applicant's claimed invention is deemed to be obvious, within the meaning of 35 USC 103(a) in view of the teachings of Smith et al, Bogen et al and Quenin et al and further in view of Bell et al.

Response to Arguments

5. Applicant's arguments filed October 24, 2005 have been fully considered but they are not persuasive.

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Applicants' amended claims now recite the limitation of the first predetermined temperature being differentiated from the second predetermined temperature by different amounts of heat being disposed to the first and second analysis slides. First the Examiner notes that this limitation involves how the temperature heating of the analysis operates. In claims directed to an apparatus, the claims must define structurally over the prior art. Apparatus claims are limited by their structural components and not the manner of operating. See MPEP 2114.

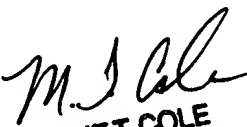
Bogen et al teach that heating elements are formed into the slide frame base. Because each slide has its own heating element, the slides can be maintained at different temperatures simultaneously. Of course where different heating temperatures are disposed to different slides, the temperature of the different slides is differentiated. It would have been obvious to one of ordinary skill in the art to determine the predetermined temperature of each heating element so that the slides being heated are maintained at the temperature needed for the reactions to take place properly.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya C. Younger whose telephone number is 571-272-1256. The examiner can normally be reached on Monday-Thursday 10:30 a.m. - 7:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MONIQUE T. COLE
PRIMARY EXAMINER

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